Observatory has been greatly handicapped by the conditions briefly outlined above, I commend to the department the zeal of the staff as worthy of more consideration than seems to have been accorded it in the past. The members of the staff have vied with each other during the past year in doing more than was required of them, and thus have been enabled to maintain a good average of records; but such conditions can not be expected to continue. In one instance a member of the Nautical Almanac Department, Mr. H. B. Evans, in addition to a full-time service in that department, has devoted a good part of three nights in the week to observational astronomy, giving to the records data of much value. Also, Mr. Hammond, a member of the computing division of the observatory, has contributed overtime work in the search for and location of asteroids, a work that has been much appreciated by outside astronomers.

Such observations have been published in astronomical periodicals and the authors given credit for their work, thus making an incentive for additional labor.

While such work may be only incidental to naval purposes, it helps to maintain the interest of observers in a class of astronomy that is more or less a drudgery and carries out the precept of the observatory to contribute to astronomical science. It also produces better results in routine observations.

SCIENTIFIC NOTES AND NEWS.

The French minister of public instruction and fine arts has conferred the degree of officer of public instruction upon Dr. Lester F. Ward for his scientific and sociological works. This highest degree of the academic order is usually only conferred on persons who have for five years held the degree of officer of the academy.

Dr. W. Roux, professor of anatomy at Halle, has been elected a foreign member of the Brussels Academy of Sciences.

Professor H. De Vries, of Amsterdam, and Professor R. von Wettstein, of Vienna, have been elected honorary members of the Berlin Botanical Society.

Grants in aid of research have recently been made from the Rumford Fund of the American Academy of Arts and Sciences as follows: to Professor Edward W. Morley, for his research on the nature and effects of ether drift, $500; to Professor Carl Barus, for his research on the study by an optical method of radio-actively produced condensation, $200; to Mr. J. A. Dunne, for his research on fluctuations in solar activity as evinced by changes in the difference between maximum and minimum temperature, $200.

President Roosevelt has appointed the assay commission for 1904, which will test the weight and fineness of coins produced at the mints of the United States during the year. The members include Dr. S. W. Stratton, chief of the Bureau of Standards; Mr. Marcus Benjamin, of the Smithsonian Institution; Professor Edgar F. Smith, of the University of Pennsylvania, and Professor William Hallock, of Columbia University.

Mr. J. A. Ewing, F.R.S., lately professor of mechanism and applied mechanics, Cambridge, and Mr. Karl Pearson, F.R.S., professor of applied mathematics in University College, London, and formerly fellow, have been elected to honorary fellowships at King's College, Cambridge.

The silver medal of the Munich Academy of Sciences has been conferred on Professor Rudel, of Nüremberg, for his researches in climatology.

Dr. W. T. Blanford, F.R.S., who was on the staff of the Geological Survey of India from 1855 to 1872, has been made a Companion of the Order of the Indian Empire.

Mr. R. G. Carruthers and Mr. G. W. Grabham have been appointed geologists on the British Geological Survey.

Brigadier-General A. W. Greely, chief signal officer of the U. S. Army, has refused to go on the retired list with the rank of major-general, preferring to remain in active service.

Dr. T. D. Wood, professor of physical education in Teachers College, Columbia University, has been given leave of absence for the rest of the year on account of his health.

PROFESSOR E. B. VOORHEES, of Rutgers College, has been appointed president of the New Jersey State Board of Agriculture.

MR. OTTO E. JENNINGS has been appointed custodian of botanical collections at the Carnegie Museum, Pittsburg, Pa. Mr. Jennings has been Professor Kellerman's herbarium assistant for two years in the Ohio State University.

DR. E. W. OLIVE, who has been studying for the past year some nuclear problems of certain lower plants in the laboratory of Professor Strasburger, has received another grant from the Carnegie Institution and will continue his work in the laboratory of Professor Harper, at Madison.

PROFESSOR VERNON F. MARSTERS, of the department of geology in the University of Indiana, is spending a year's leave of absence at Columbia University, pursuing work in geology and anthropology.

MR. GEORGE T. HASTINGS, a graduate of Cornell University and assistant in botany in that university in 1899–'00, recently returned from Santiago, Chili, where for two years he has been teacher of science in the English Institute. Mr. Hastings made a good collection of plants from central Chili during his stay there and is now preparing sets for distribution to herbaria. He is doing this work in the botanical department at Cornell.

PROFESSOR BLANCHARD, of Paris, accompanied by Dr. R. Wurtz, professor in the medical faculty of the University of Paris, and twelve students of the Paris Institut de Médecine Coloniale, paid a visit to the London School of Tropical Medicine on December 28.

AS we have already stated, Dr. Hans Gadow, F.R.S., lecturer on zoology in the University of Cambridge, is coming to America at the end of March for the purpose of giving six lectures on 'The Coloration of Amphibia and Reptiles,' specially prepared for the Lowell Institute in Boston. He desires to secure engagements for lectures in other institutions. Communications regarding engagements for lectures may be sent directly to Dr. Gadow at the University Museum of Zoology, in Cambridge, or, after March 15, in care of Professor W. T. Sedgwick, Massachusetts Institute of Technology, Boston.

IT is expected that Dr. Alexander Graham Bell, bringing the remains of James Smithson on the steamship *Princess Irene*, will arrive in New York this week. It is planned that the *Dolphin*, of the U. S. Navy, will meet the steamship and carry the remains of Smithson to Washington.

THE District of Columbia Library Association has held a meeting in memory of the late Henry Carrington Bolton and Marcus Baker. Professor F. W. Clarke made the principal address on Dr. Bolton, and Dr. W. H. Dall, the principal address on Mr. Baker.

THE Max Müller Memorial Fund, which is to be held in trust by the University of Oxford for the promotion of learning and research in the history, archeology, languages, literature and religion of ancient India, now amounts to about $12,000.

IT is proposed to erect at Rome a memorial to the eminent mathematician, Luigi Cremona, and it is hoped that the contributions will be international in character. Subscriptions should be sent to Signor I. Sonzogno, Piazza San Pietro in Vincoli, 5, Rome.

THE death is announced of Miss Anna Winlock, of the Harvard College Observatory. She was the daughter of Professor Joseph Winlock, superintendent of the Nautical Almanac, and later, until his death in 1875, director of the Harvard College Observatory. At this time Miss Winlock entered the observatory as a computer and subsequently assisted in the preparation of a large number of important papers issued from the observatory.

THE death is announced of the eminent professor of psychiatry and nervous diseases in the University of Berlin, Dr. Friedrich Jolly. Professor Jolly, who was born at Heidelberg in 1844, occupied professorial chairs at Würzburg and at Strasburg before he was called to Berlin in 1890. We regret also to record the deaths of M. Jean Dufour, professor of plant physiology at Lausanne at the age of forty-three years; of Dr. A. Edmund Hess, professor of mathematics at Marburg, at the age of sixty years; of Dr. Sophus Ruger, professor

of geography and anthropology at the Technical Institute of Dresden, at the age of seventy-two years, and of Dr. Sophie Perejaszlawzena, formerly head of the Zoological Station at Sebastopol.

A CABLEGRAM to the New York *Times* states that by the will of the late Herbert Spencer all rights and property in his books and investments are given to the trustees, the Hon. Auberon Herbert, Dr. Henry Charlton Bastian and David Duncan, with instructions to employ the yearly revenue "in resuming and continuing during such period as may be needed for fulfilling my express wishes, but not exceeding the lifetime of all descendants of Queen Victoria who shall be living at my decease and of the survivors and survivor of them, and for twenty-one years after the death of such survivor, the publication of the existing parts of my 'Descriptive Sociology,' and the compilation and publication of the fresh parts thereof upon the plan followed in the parts already published." Afterward all copyrights, stereotype plates, etc., are to be auctioned and the proceeds divided among a number of scientific societies. The will orders that Spencer's autobiography is to be published simultaneously in Great Britain and the United States, and requests David Duncan to write a biography in one volume of moderate size.

THE Linnean Society of New South Wales has received about $170,000 from the late Sir William Macleay for the endowment of research fellowships in science.

WE learn from *Nature* that a meeting was held in the house of the Zoological Society on January 5 to consider proposals for the organization of zoologists. Forty-one zoologists from England, Scotland and Ireland attended the meeting. The following resolution was carried by a large majority: "That it is desirable that the zoologists of Great Britain and Ireland be organized for the consideration of all matters affecting the interests of zoology and zoologists, and to take such action as may seem desirable." A committee consisting of Professor Cossar Ewart, Professor Bridge, Professor Hickson, Dr. Scharff, Dr. G. C. Bourne, Dr. Ridewood and Mr. Cunningham was appointed to draw up a scheme.

BARON ERLAND NORDENSKJÖLD'S expedition to Peru and Bolivia is expected to arrive about February 15 at La Paz, the capital of Bolivia, which will be the departing point for the expedition to Lake Titicaca.

OWING to a fire in a printing house in New York City the electrotype plates and matter in type of several volumes of the *Transactions* of the American Institute of Eletrical Engineers have been destroyed.

Nature states that the Brothers Kearton have arranged to hold an exhibition of enlarged photographs of birds, beasts, reptiles and insects at the Modern Gallery, London, on January 2–12, 1904, inclusive. The gallery will be open from 10 A.M. until 9 P.M., and Mr. R. Kearton will deliver lime-light lectures to children each afternoon, and to adults in the evening.

WE learn from the London *Times* that Mr. James G. Ferrier, secretary of the Scottish Antarctic Expedition, has received from Mr. W. S. Bruce, the leader of the expedition, narratives of the voyage of the *Scotia,* written by Mr. Bruce and the individual members of the staff, dealing with meteorology, zoology, biology and other scientific departments of the work of the expedition. Mr. Bruce, in his letter, stated that the *Scotia* had made a very satisfactory record, and he expressed the hope that he and his staff might be allowed to complete their researches. The appeal for funds to enable the expedition to prolong its stay in the Antarctic has now been so liberally responded to that the cruise will be continued for at least six months, and as Mr. Ferrier is still receiving donations an extension for a year may be possible. Mr. Bruce's desire will then be fulfilled. Meantime, the *Scotia* has gone north to Buenos Ayres to refit. The expedition left its winter quarters in Scotia Bay, South Orkney Islands, on November 23 —sooner than was anticipated owing to the unexpected breaking of the ice. Some members of the expedition were left behind in the winter quarters in charge of a meteorolog-

ical station. They were stocked with provisions for fully 18 months, and the place also abounds with penguins, fish and seals. Mr. Bruce reports that all on board the *Scotia* are in robust health and eager for further work.

DR. H. W. WILEY, chief of the Bureau of Chemistry, U. S. Department of Agriculture, appeared before the committee on commerce of the house of representatives on January 5, in support of the pure food bill now before congress.

THE regular annual meeting of the New Mexico Academy of Sciences, held on December 28, at Santa Fé, was well attended and interesting papers were presented. The geological part of the program included the following: Presidential address by Hon. Frank Springer on the 'Life of Louis Agassiz'; 'Note on Block Mountains,' by Dr. Charles R. Keyes; 'New Rapid Assay Method for Zinc,' by Professor Francis C. Lincoln; 'Glaciation in the High Plateau of Bolivia,' by Professor W. G. Tight; 'Revised Geological Column for New Mexico,' by Dr. Charles R. Keyes; 'Notes on Some New Mexico Minerals,' by Dr. Rufus M. Bagg; 'Some Irrigation Problems in New Mexico,' by Professor Oliver R. Smith; 'Geographic Development of South America, by Professor W. G. Tight. The president of the academy is Hon. Frank Springer, of Las Vegas; vice-president, Dr. Charles R. Keyes, president of the New Mexico School of Mines, Socorro; secretary, Professor W. G. Tight, of Albuquerque.

AT a recent meeting of the State Commission in Lunacy, held December 1, the recommendation contained in the resolution passed by the advisory board of the Pathological Institute, October 29, 1903, to the effect that: "Physicians appointed to the state hospital service should serve a preliminary term of from three to six months on Ward's Island; that the Pathological Institute and the Manhattan State Hospitals on Ward's Island organize a training school for this purpose and that provisions be made for the construction of additional accommodations in connection with the staff house at Manhattan State Hospital, west," was given careful consideration. The recommendation was adopted, and the state architect has already been notified to arrange at once plans and specifications for the construction of an addition to the staff house at Manhattan, west, to the extent of providing twelve additional bed-rooms.

AT a meeting of the British Astronomical Association, held on December 30, Sir William Ramsay gave a lecture entitled 'Some Speculations regarding Atoms and Stars.' Beginning with a sketch of the discovery of helium, he gave reasons for holding that terrestrial helium was the same as that existing in the sun, and that there was no other unknown body, asterium, associated with it in the chromosphere, as was sometimes supposed. He next pointed out that of the group of inactive gases, helium, neon, argon, krypton and xenon, only helium and krypton had been detected in stellar bodies, and went on to apply the fact that the characteristic line of krypton was prominent in the spectrum of the aurora to the explanation of that phenomenon. These five gases, having their molecules composed of single atoms, not of a pair of atoms like the other gases of the atmosphere, would get heated more rapidly than the others, and would be carried up more rapidly to the outer confines of the atmosphere by the general atmospheric circulation. Hence the top layers of the atmosphere might be supposed to consist largely of those gases. Now, Arrhenius's hypothesis was that electrified particles were shot out from the sun and in turn electrified the gases in those top layers; in this way the argon and its companions would be excited to yield their characteristic spectra. The reason why that of krypton alone was visible was, as was indicated by laboratory experiments he had carried out, because it had a greater power of emitting light than the others. The aurora might then be considered as a ring discharge round the poles of the earth, by which the yellow-green line of krypton, the line that made the aurora what it was, was caused to shine out, the streamers being the effect of the magnetic action exerted by the earth. In the latter part of his lecture, Sir William Ramsay described some of the phenomena af-

forded by radium. He described how, in addition to three kinds of rays, it gave off a self-luminous gas or emanation, which contracted very quickly—so quickly indeed that in a month it contracted itself out of existence, leaving only a purple discoloration in the glass of its tube. He told how in trying to get the spectrum of this emanation he found one of the helium lines, and a few days later discovered that the tube yielded the complete spectrum of helium, his inference being that the emanation was continually changing into helium which perhaps disappeared in the glass. The speculation was suggested that there was a limit to the size of atoms, as of stars, and that some atoms were too heavy to be stable and threw off electrons, just as the planets, on the nebular hypothesis, were thrown off by the original nebula. The atoms of bodies like uranium or radium might be supposed to have reached this limit of stability, and conceivably the electrons they shot off formed matter with simple atoms which in turn polymerized into heavier ones.

UNIVERSITY AND EDUCATIONAL NEWS.

Syracuse University has received $150,000 from the estate of the late James J. Belden. $50,000 goes to the Medical College and $100,000 to the College of Liberal Arts. Syracuse University also receives the residue of the estate of the late John Lyman. The value of the estate is not stated; but special bequests to charitable institutions were made by Mr. Lyman, amounting to over $150,000.

The new library building of Clark University was dedicated on January 14. The building has been erected at a cost of $125,000 provided by the will of the founder of the university. President Hall announced a gift of $100,000 from Mr. Andrew Carnegie for the library, this gift being made in honor of Senator Hoar, president of the board of trustees.

The Catholic University of America has received $50,000 from the Knights of Columbus for the endowment of a chair of secular history.

Princeton University has received a bequest of $25,000 from the late Louis C. Vanuxem, of Philadelphia.

E. W. D. Holway, banker of Decorah, Iowa, has given his private library and collection of fungi to the University of Minnesota. The library numbers about 1,000 volumes, including many rare and valuable works, and the collection, with some 85,000 specimens, is especially rich in illustrative material of the smuts and rusts, a group in which Mr. Holway is a well-known specialist.

Sir William H. Wills and Sir Frederick Wills have each contributed $5,000 to liquidate the debt of $25,000 at University College, Bristol. The whole sum has now been collected.

The Rev. Dr. William E. Huntington has been elected president of Boston University. He has been since 1882 dean of the university, and since the resignation of Dr. Warren last year, acting president. The trustees decided that the university should equip laboratories for chemistry, physiology, biology, geology and botany, but that the courses in physics be continued as heretofore at Massachusetts Institute of Technology.

J. H. Bair, Ph.D., Carnegie research assistant working in the psychological laboratory of Columbia University, has been appointed professor of psychology and education in the University of Colorado.

At Edinburgh University, Mr. E. M. Horsburgh has been appointed lecturer on practical mathematics; Dr. Jacob Halm, lecturer on astronomy, and Dr. H. J. Stiles, lecturer in applied anatomy.

Mr. Herbert Tomlinson, F.R.S., known for his contribution to physics, has resigned the principalship of the Southwestern Polytechnic at Chelsea, London.

Mr. R. H. Yapp, of Cambridge, has been appointed professor of botany in the University College of Aberystwyth.

Professor F. C. M. Störmer has been appointed professor of pure mathematics at the University of Christiania.